

UNITED STATES GOVERNMENT
MEMORANDUM

U.S. FISH AND WILDLIFE SERVICE

NEW ENGLAND FIELD OFFICE
22 BRIDGE STREET - UNIT # 1
CONCORD, NEW HAMPSHIRE 03301-4986TO: Bill Beckwith, Water Quality Standards Coordinator
EPA, Boston

March 17, 2000

From: Vernon Lang, Assistant Supervisor,
New England Field Office

In accordance with your March 1, 2000 Memorandum, I have identified a number of issues that would be appropriate for Massachusetts to consider during its next triennial review process. To the extent possible, my comments follow the outline of the regulations and policies.

As a general comment, the existing standards reflect the historical notion that one purpose of the standards is to classify waters and develop criteria to protect public water supply as the highest use and make all other uses subservient. Therefore, one of the tasks for the next triennial review should be to correct this false notion regarding designated uses in Class A waters and ensure that the protection and propagation of aquatic life and wildlife and recreation in and on the water are properly designated and protected as mandatory national goal uses and not as subservient uses.

Water Quality Standards 314 CMR 4.00

4.01: General Provisions

It would be useful to know if the water quality standards can be enforced independent of a permit or license as is the case for Vermont and New Hampshire.

4.02: Definitions

Aquatic Life - Suggest that this definition be revisited. As written, it refers to native, naturally diverse, communities of aquatic flora and fauna. While I do not know how this is interpreted, it appears to provide sufficient discretion to include or eliminate species based on factors such as diversity, community structure and residence status. Also, I am not certain if the definition captures wildlife and threatened and endangered species.

Background Conditions - As written, this definition allows for incremental degradation caused by a wide array of unregulated cultural influences to be included in the analysis of water quality or permit compliance. It would seem that a better approach to protect and restore water quality would be to develop a definition of a natural or reference condition that would exclude effects caused by human activities.

Existing Use - This definition could be interpreted to make the protection and propagation of aquatic life and wildlife subservient to public water supply or other designated uses. The definition

should be revised to be in accordance with the hierarchy of uses in the Clean Water Act. Presently, a water body containing eelgrass or other macrophytes could be designated for navigation uses and an entity could claim that these macrophytes impair navigation and should be excluded as an existing use. A similar claim could be made regarding waterfowl use on waters designated for public water supply.

Pollutant - Suggest using the definition from the Clean Water Act.

Pollution - Suggest adding this definition from the Clean Water Act.

Biological integrity - Recommend adding this term.

Impair - Should this be a defined term since it is used in the standards in situations where everyone should know exactly what it means?

4:03: Application of Standards

- (1) Effluent Limitations- Should the term background conditions as it is presently defined be used in these situations or a reference condition free from human induced effects? It would be useful to clarify whether the standards only apply to discharges or to activities associated with a discharge or to activities in a broader sense that could adversely affect water quality such as ground water depletion or other land use activities.

4:04: Antidegradation Provisions

- (2) Protection of High Quality Waters - The existing provisions apparently contain a two part test to exempt certain discharges from a full review. This includes discharges that do not have the potential to impair existing or designated uses as one test and cause any significant lowering of water quality as the second test. If a discharge fails one but not the other, is it exempted from a full review? Are the terms insignificant and significant appropriate in the context of an antidegradation review? Should they be replaced with other terms such as detectable or measurable change?
- (3) Protection of Outstanding Resources Waters - This section contains an internally inconsistent group of waters. Notably, public water supply waters should be identified as no discharge waters not no impact waters. Reservoir, lake, pond, and stream drawdowns to provide water for water supply purposes, often cause severe impacts on aquatic life and recreational uses. A lower Tier designation would seem to be appropriate for water supply waters. The full Tier III designation should be reserved for that group of waters that have outstanding aesthetic, recreational or ecological values and that would be managed as no impact waters.

As mentioned in your Memorandum, the 1993 implementation policy needs to be revised and expanded to include the full range of activities subject to antidegradation review. The current policy only covers a subset of NPDES discharges.

4.05: Classes and Criteria

(3) Inland Water Classes

- (a) Class A - The phrase "To the extent compatible with this use" identifies an inconsistency with the hierarchy of uses listed on Federal Register page 51409 of the November 8, 1983 EPA water quality standards regulation. This is similar to the problem identified in the existing use definition and elsewhere in the 1996 regulation. Basically, Massachusetts has made the protection and propagation of aquatic life and wildlife subservient to public water supply by not making the goal use a designated use and by including the compatibility language referenced above. This needs to be corrected in the triennial review process.

Excepting Class A, other fresh and marine waters are designated as habitat for fish, other aquatic life and wildlife. This designated use should be expanded to include the full complement of life cycle functions of aquatic life and wildlife such as, but not limited to, reproduction, migration, growth, overwintering and other critical functions.

Narrative and/or numeric biological criteria should be developed to support the designated aquatic life, wildlife and habitat uses. These comments also apply to Class B and C waters and the marine and estuarine water classes.

1. Dissolved Oxygen

Suggest including D.O. criteria in freshwaters to protect spawning and incubation functions in cold and warm water fisheries.

- b. The last part of this subsection states that D.O. levels shall not be lowered below 75 % of saturation due to a discharge. Since the phrase is keyed to a discharge and not an activity, does this mean that D.O. saturation levels could be lowered below 75 % saturation (60 % for Class B) due to activities in the waters or watershed, e.g., removing riparian vegetation? Perhaps this should be revisited in the context of the background condition definition.
- c. This provision for a site-specific criterion provides a broad exemption from the numeric criteria established in subsection a. of this part. In particular, the background condition as defined in these regulations makes the provision problematic since the effects of cultural influences are included in the analysis. The application of site-specific criteria to the hypolimnion of stratified waters would also seem to be problematic for the same reason. These comments also apply to Class B and C waters and the marine and estuarine water classes.

(c) Class C and SC - Does Massachusetts have a real need to maintain this water classification any longer?

4:05: (5) Additional Criteria

(e) Toxic Pollutants - This subsection makes reference to the section 304(a) criteria and indicates that the Division would use them unless a site-specific limit is established. Consequently, it is not clear whether the 304(a) criteria have been officially adopted as an enforceable element of the Massachusetts water quality standards. Second, it is not clear whether the site-specific limit

referenced in (e) 1. is a modification of the criteria in the standards or to an individual permit. Section 4.05:(5)(e)1 indicates the latter as does the main body of this section where the reference is made to recommended limits, a term used in the toxics implementation policy. I would note that the other New England States that I am familiar with have officially incorporated the 304(a) criteria into their standards and that site-specific criteria for waters require a modification of the toxics criteria in the standards.

The 1990 Toxics Implementation Policy appears to be dated and in need of revision since it reflects the way toxics were controlled prior to the effective date of the 1987 amendments to the Clean Water Act when the §304(a) criteria were treated as recommended limits as opposed to enforceable criteria.

A new subsection (f) should be added to establish hydrology criteria in streams, lakes, ponds, and reservoirs.

4:06: Basin Classification

(1)(d)1. Public Water Supply

These waters are designated for protection under 314 CMR 4.04(3) as Tier III waters. Since the water level and streamflow regulation associated with the use and operation of these systems frequently is inimical to the protection and propagation of aquatic life including wildlife, a lower antidegradation classification should be developed for these waters. In addition, it may be useful to consider subclassifications for Class A waters so that waters could be designated for ecological or water supply uses as was done in Vermont.

Any questions should be directed to me at 603-225-1411 or e-mail Vernon_Lang@fws.gov.

cc: Glenn Haas, MaDEP